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PATENT

Attorney Reference Number 6541-60555-01
Application Number 09/743,268

Remarks

Reconsideration is requested in view of the preceding amendments and the following remarks. Claims 1-29 are in the application.

Claims 1, 3, 6, 8-11, 13, 16, and 18-20 are amended to clarify that a wireless device refers to any mobile communication device as described in the specification at, for example, page 5, first full paragraph. No change in claim scope is intended.

Rejections in View of Hall

Claims 1, 3-5, 7-8, 11, 13-15, and 17-18 stand rejected as allegedly anticipated by Hall et al., U.S. Patent 6,424,837 ("Hall"). This rejection is traversed. Claim 1 as amended recites, in part, a method of monitoring performance of a wireless system that comprises:

- a) transmitting a communication signal from a mobile wireless device to a radio base station;
- b) obtaining uplink performance parameters associated with the communication signal;
- c) obtaining location information of the mobile wireless device by analyzing the communication signal; and
- d) evaluating the performance of the wireless system using the uplink performance parameters and the location information of the mobile wireless device.

Hall does not teach or suggest such a method. According to Hall, the performance of a cellular system can be measured using specially configured "automated monitoring sites" that "measure the signal level required to acquire service from a particular cell site." Col. 4, lines 32-34. These monitoring sites are placed at elevated locations such as on tall buildings or on mountains, and are fixed, not mobile. Col. 3, lines 56-60. Thus, according to Hall, automated monitoring of a wireless network is based on communications between fixed cell sites and fixed automated monitoring sites, and not on communications between a mobile wireless device and a fixed radio

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base station as recited in claim 1. Hall teaches that these fixed automated monitoring sites are controlled so that transmitted power is decreased at one site and increased at another in order to simulate movement of a mobile station. Col. 4, lines 49-60. Hall does not teach or suggest using performance parameters of the uplink from a mobile device to evaluate wireless system performance.

Hall does teach conventional mobile assisted handoff (MAHO) in which a mobile station signal is handed off from one radio base station to another, but Hall does not teach or suggest using MAHO for evaluating the performance of the wireless system. Hall also teaches a method of determining mobile device location for emergency (E-911) services, but Hall does not teach or suggest using such location information for evaluation of wireless system performance. Col. 6, lines 12-18. Indeed, Hall teaches fixed automatic monitoring sites for evaluating wireless system performance, and location determination of such fixed sites is unnecessary because these fixed sites are not mobile. For at least these reasons, claim 1 and dependent claims 2-7 are properly allowable over Hall.

Claims 8, 11, and 18 also recite features and combinations of features that are neither taught nor suggested by Hall. Claim 8 as amended recites a method of monitoring performance of a wireless system that comprises, in part, evaluating the performance of a wireless system using uplink performance parameters and location information of a mobile wireless device. Claim 11 as amended recites a method of evaluating the performance of the wireless system using uplink performance parameters and location information of each of a plurality of mobile wireless devices. Claim 18 as amended recites a method of monitoring performance of a wireless system that comprises, in part, evaluating the performance of the wireless system using uplink performance parameters and location information of a plurality of mobile wireless

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devices. Hall does not teach or suggest such methods. Hall teaches using fixed automatic monitoring sites for evaluating wireless system performance, and does not teach or suggest using uplink performance parameters of mobile wireless devices. Therefore, claims 8, 11, and 18 and respective dependent claims 9-10, 12-17, and 19-20 are properly allowable.

Rejections in View of Hawkes

Claims 21-25 and 27-29 stand rejected as allegedly anticipated by Hawkes et al., U.S. Patent 5,973,643 ("Hawkes"). This rejection is traversed. Claim 21 recites a system for monitoring performance of a wireless system that comprises, in part, a system analyzer coupled to a switch which evaluates the performance of a wireless system based on uplink performance parameters and locations of wireless devices. Hawkes does not teach or suggest such a system. The portions of Hawkes cited by the Office action state that:

All MLSs [mobile location sensors] connect to the RLP [real-time location processor] 5; [sic] via the cellular system real-time transmission facility such as a metropolitan area network 6. There is one RLP 5 associated with each MSC 3. Col. 5, lines 26-29.

In either configuration, the RLP accepts location requests from the search and queue process and then tasks all the MLSs in the vicinity of the cellular telephone to take measurements on cellular telephone transmissions. Col. 10, lines 55-59.

Both of these portions of Hawkes describe location determination, and neither teaches or suggests any kind of wireless system performance evaluation based on a location of a wireless device and uplink performance parameters. For at least this reason, claim 21 and dependent claim 22 are properly allowable over Hawkes.

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Claim 23 recites a system for monitoring performance of a wireless system that comprises, in part, a system analyzer coupled to a switch which evaluates the performance of the wireless system based on uplink performance parameters and locations of wireless devices. As noted above, Hawkes teaches wireless device location determination, but fails to teach or suggest evaluating the performance of a wireless system based on uplink performance parameters. For at least this reason, claim 23 is properly allowable.

Hawkes similarly fails to teach or suggest the features and combination of features recited in claims 24, 27, and 29. Claim 24 recites, in part, a system for monitoring performance of a wireless system that includes a system analyzer coupled to a switch which evaluates the performance of the wireless system based on uplink performance parameters and locations of wireless devices. Claim 27 recites, in part, a system analyzer coupled to a switch which evaluates the performance of a wireless system based on uplink performance parameters and a location of a wireless device. Claim 29 recites, in part, a system for monitoring performance of a wireless system that includes a system analyzer on a wireless device that evaluates the performance of the wireless system based on uplink performance parameters and the location of the wireless device. As discussed above, Hawkes teaches mobile station location, but does not teach or suggest evaluation of wireless network performance based on uplink performance parameters.

For at least these reasons, claims 24, 27, and 29 and dependent claims 25-26 and 28 are properly allowable.

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For at least the reasons noted above, all pending claims are properly allowable, and action to such end is requested.

Respectfully submitted,

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